

Product Information

Anti-FP Prostanoid Receptor

produced in rabbit, affinity isolated antibody

Catalog Number **P8622**

Synonym: Anti-Prostaglandin F_{2α} Receptor

Product Description

Anti-FP Prostanoid Receptor, also known as FP regulatory protein (FPRP), is produced in rabbit using as immunogen a synthetic peptide conjugated to KLH. The peptide corresponds to the 2nd extracellular loop of human FP prostanoid receptor. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

The antibody specifically recognizes human FP prostanoid receptor by immunohistochemistry with formalin-fixed, paraffin-embedded tissues and by immunocytochemistry. Not tested for other uses. The immunizing peptide has 94% homology with rat and mouse genes. Other species reactivity has not been confirmed.

Prostaglandin F_{2α} is involved in a number of physiologic processes. It serves as a potent luteolytic agent in many species, has been implicated as a modulator of intraocular pressure, and may be important in smooth muscle contraction in the uterus and elsewhere. Its effects on cells are mediated through specific interaction with prostaglandin receptors. Knockout mice lacking the receptor for prostaglandin F_{2α} are unable to deliver normal fetuses at term due to a lack of response to oxytocin. The mice also failed to show the decline in serum progesterone expected to precede parturition. However, if the mice had their ovaries removed at day 19 of pregnancy, normal delivery occurred. In conclusion, parturition is initiated when prostaglandin F_{2α} interacts with its receptor in ovarian luteal cells to induce luteolysis.

Prostaglandin F_{2α} receptor expression has been documented in eye, ovary, placenta, and uterus. ESTs have been isolated from placental libraries.

Reagent

Supplied as a solution of 1 mg/ml in phosphate buffered saline, pH 7.7, containing 0.1% sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a minimum working concentration of 4-8 µg/mL was determined by immunohistochemistry and immunocytochemistry using uterus vessels.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

1. Orlicky, D. J., et al., Human chromosome 1 localization of the gene for a prostaglandin F_{2α} receptor negative regulatory protein., *Hum. Genet.*, **97**, 655-658 (1996).

2. Sales, K. J., et al., Expression, localization, and signaling of prostaglandin F_{2α} receptor in human endometrial adenocarcinoma: regulation of proliferation by activation of the epidermal growth factor receptor and mitogen-activated protein kinase signaling pathways., *J. Clin. Endocrinol. Metab.*, **89**, 986-993 (2004).

3. Sugimoto, Y. et al., Failure of parturition in mice lacking the prostaglandin F_{2α} receptor. *Science*, **277**, 681-683 (1997).

This product manufactured by MBL International.

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